

CLAIMS

1. An organic light emitting diode device having a passivation layer comprising boron oxide.
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2. A device according to claim 1, comprising a substrate, a layer of organic, preferably polymeric, light emitting material, and a transparent cathode comprising a layer of material with a work function less than 4 eV.
- 10 3. A device according to claim 2, wherein said material with a work function less than 4 eV comprises calcium.
4. A device according to claim 2 or 3, wherein said passivation layer overlies the layer of material with a work function less than 4 eV directly.
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5. A device according to any preceding claim, comprising an encapsulating layer overlying said passivation layer.
- 20 6. A device according to claim 5, wherein the encapsulating layer comprises a dielectric oxide selected from the group consisting of Al_2O_3 , SiO_2 , TiO_2 , ZrO_2 , MgO , HfO_2 , Ta_2O_5 , aluminum titanium oxide and tantalum hafnium oxide.
7. A device according to any preceding claim, comprising sealing layers of adhesive and glass.
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8. A device according to claim 7, wherein said adhesive comprises epoxy resin.
9. A method of manufacturing an organic light emitting diode device, comprising depositing a passivation layer comprising boron oxide on the device.
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10. A method according to claim 9, wherein said passivation layer is deposited by thermal evaporation.

11. A method according to claim 9 or 10, wherein the device comprises a substrate, a layer of organic, preferably polymeric, light emitting material, and a transparent cathode comprising a layer of material with a work function less than 4 eV, e.g. calcium.
12. A method according to claim 11, wherein said passivation layer is deposited directly on to the layer of material with a work function less than 4 eV.
- 10 13. A method according to claim 9, 10, 11 or 12, comprising a further step of depositing an encapsulation layer on to the passivation layer.
14. A method according to claim 13, wherein the encapsulation layer comprises a dielectric oxide selected from the group consisting of Al_2O_3 , SiO_2 , TiO_2 , ZrO_2 , MgO ,
15 HfO_2 , Ta_2O_5 , aluminum titanium oxide and tantalum hafnium oxide.
15. A method according to claim 13 or 14, wherein the encapsulation layer is deposited by electron beam evaporation.
- 20 16. A method according to claim 13 or 14, wherein the encapsulation layer is deposited by sputtering.
17. A method according to any one of claims 9 to 16, comprising sealing the device, for example with epoxy resin and glass.
- 25 18. A method according to any one of claims 9 to 17, comprising adapting the thickness of the passivation layer to the energy of electrons, ions or fields from which protection is required.
- 30 19. A passivation layer for an electronic device, the passivation layer comprising boron oxide.